IN THE CLAIMS

What is claimed is:

1. (Original) A method for gathering and monitoring the simultaneous status of nodes in a storage area network (SAN), comprising:

receiving alert messages corresponding to status events in the storage area network, each status event having a corresponding event category and severity value;

aggregating the alert messages according to event category and severity value to generate a category specific severity ranking of the alert messages;

displaying a status array having a plurality of chart entries, each chart entry corresponding to alert messages of a particular event category and each chart entry having a node entry for each node having status attributable to the alert messages; and

displaying, within at least one chart entry, node entries having a status event associated with the event category for that chart entry, the node entries displayed in the chart entry according to the severity ranking and each node entry indicative of a severity scale of status for the corresponding effected node.

2. (Currently Amended) The method of claim 1 wherein displaying, within the at least one chart entry, comprises:

accumulating events of each of a plurality of severity levels, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level, wherein the severity scale for a node entry is an enumeration of events received for each of the plurality of severity levels within the severity ranking, the severity ranking determined by the severity scale for each node entry; and

displaying the enumeration of events received for each node entry within the at least one chart entry containing that node entry, the enumeration of events received being displayed in an order according to the severity ranking.

3. (Original) The method of claim 2 wherein the enumeration is a histogram having a magnitude based on the severity scale and a quantity of events within each severity level within the severity ranking.

4. (Original) The method of claim 3 wherein the histogram has a plurality of visually overlapping elongated bar segments, each elongated bar segment corresponding to a particular severity level.

5. (Original) The method of claim 1 further including discovering a topology of nodes in the SAN, wherein the alert messages correspond to status events for each of a plurality of selected nodes in a selection tree, the selection tree indicative of the nodes in the SAN.

6. (Original) The method of claim 1 further including filtering the status events to compute a subset of elected events, wherein the received events correspond to elected events determined in response to predetermined filtering logic at the agents processing the elected events.

7. (Original) The method of claim 1 wherein each chart entry has a magnitude axis, the magnitude axis indicative of a relative range of the quantity of status events within each of the severity levels corresponding to a plurality of node entries reflected in the chart entry.

8. (Currently Amended) The method of claim 1 wherein each chart entry has a manageable entity axis, the manageable entity axis arranged, for each node, according to increasing ~~security~~ severity scale denoting the severity ranking for each node included in the chart entry, and further comprising computing the severity scale for each node according to a predetermined severity metric.

9. (Original) The method of claim 1 wherein the severity level corresponds to a threshold value, the threshold value identifying triggering of an event having the corresponding severity level.

10. (Original) The method of claim 1 wherein each event in an event category has a set of threshold values, the threshold values indicative of a quantitative metric triggering the particular event and severity.

11. (Original) The method of claim 10 further comprising processing and propagating the threshold values to remote agents, the remote agents operable to analyze nodes and determine when a particular metric satisfying a triggering threshold is attained and generate the corresponding event.

12. (Original) The method of claim 1 wherein the nodes further comprise manageable entities, the manageable entities responsive to the server in a SAN and further including storage entities, connectivity entities, and database entities.

13. (Original) The method of claim 1 further comprising selectively suppressing events of a particular category and severity.

14. (Original) The method of claim 1 wherein the chart entries in the status array are further subdivided into chart entries directed to manageable entity health, manageable entity performance, and storage system capacity.

15. (Original) The method of claim 1 comprising:

receiving a selection of at least one node in a hierarchical arrangement of nodes; and

wherein receiving, aggregating, displaying a status array, and displaying, within at least one chart entry, node entries are performed in relation to the selected at least

one node in order to display the simultaneous status of nodes in a storage area network.

16. (Original) The method of claim 1 wherein:

the status array is an N by M matrix of the plurality of chart entries, the plurality of chart entries including:

i) a general alert chart entry displaying alert status of managed entities in the storage area network;

ii) a storage chart entry indicating alert status of managed storage entities in the storage area network;

iii) a host chart entry indicating alert status of managed host entities in the storage area network; and

iv) a connectivity chart entry indicating alert status of managed connectivity entities in the storage area network.

17. (Original) The method of claim 1 further comprising

receiving a user input corresponding to selection of at least one node entry from among the node entries displayed in the status array;

displaying an expanded menu of status options for the selected entry; and

receiving a response to the menus of status options and displaying an expanded status report corresponding to the expanded menu.

18. (Original) A network monitoring device for gathering and monitoring the simultaneous status of nodes in a storage area network (SAN), comprising:

a server having a correlator operable to receive alert messages corresponding to status events in the storage area network, each status event having a corresponding event category and severity value;

an aggregator operable to aggregate the alert messages according to event category and severity value to generate a category specific severity ranking of the alert messages; and

an operator console operable to display a status array having a plurality of chart entries, each chart entry corresponding to alert messages of a particular event category and each chart entry having a node entry for each node having status attributable to the alert messages, the console further operable to display, within at least one chart entry, node entries having a status event associated with the event category for that chart entry, the node entries displayed in the chart entry according to the severity ranking and each node entry indicative of a severity scale of status for the corresponding effected node.

19. (Currently Amended) The network monitoring device of claim 18 wherein the accumulator is further operable to:

accumulate events of each of a plurality of severity levels, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level, wherein the severity scale for a node entry is an enumeration of events received for each of the plurality of severity levels within the severity ranking, the severity ranking determined by the severity scale for each node entry; and

display, within the at least one chart entry, the enumeration of events received for each node entry within the at least one chart entry containing that node entry, the enumeration of events received being displayed in an order according to the severity ranking.

20. (Original) The network monitoring device of claim 19 wherein the enumeration is a histogram having a magnitude based on the severity scale and a quantity of events within each severity level within the severity ranking.

21. (Original) The network monitoring device of claim 20 wherein the histogram has a plurality of visually overlapping elongated bar segments, each elongated bar segment corresponding to a particular severity level.

22. (Original) The network monitoring device of claim 18 wherein the server is further operable to discover a topology of nodes in the SAN, wherein the alert messages correspond to status events for each of a plurality of selected nodes in a selection tree, the selection tree indicative of the nodes in the SAN.

23. (Original) The network monitoring device of claim 18 wherein the server is further operable to filter the status events to compute a subset of elected events, wherein the received events correspond to elected events determined in response to predetermined filtering logic at the agents processing the elected events.

24. (Original) The network monitoring device of claim 18 wherein each chart entry has a magnitude axis, the magnitude axis indicative of a relative range of the quantity of status events within each of the severity levels corresponding to a plurality of node entries reflected in the chart entry.

25. (Currently Amended) The network monitoring device of claim 18 wherein each chart entry has a manageable entity axis, the manageable entity axis arranged, for each node, according to increasing ~~security~~ severity scale denoting the severity ranking for each node included in the chart entry, and further comprising computing the severity scale for each node according to a predetermined severity metric.

26. (Original) The network monitoring device of claim 18 wherein the severity level corresponds to a threshold value, the threshold value identifying triggering of an event having the corresponding severity level.

27. (Original) The network monitoring device of claim 18 wherein each event in an event category has a set of threshold values, the threshold values indicative of a quantitative metric triggering the particular event and severity.

28. (Original) The network monitoring device of claim 27 wherein the server is further operable to processing and propagating the threshold values to remote agents, the remote agents operable to analyze nodes and determine when a particular metric satisfying a triggering threshold is attained and generate the corresponding event.

29. (Original) The network monitoring device of claim 18 wherein the nodes further comprise manageable entities, the manageable entities responsive to the server in a SAN and further including storage entities, connectivity entities, and database entities.

30. (Original) The network monitoring device of claim 18 wherein the server is operable to selectively suppress events of a particular category and severity.

31. (Original) The network monitoring device of claim 18 wherein the chart entries in the status array are further subdivided into chart entries directed to manageable entity health, manageable entity performance, and storage system capacity.

32. (Original) The network monitoring device of claim 18 wherein the server is further operable to receive a selection of at least one node in a hierarchical arrangement of nodes, and display, within at least one chart entry, node entries in relation to the selected at least one node in order to display the simultaneous status of nodes in a storage area network.

33. (Original) The network monitoring device of claim 18 wherein:

the status array is an N by M matrix of the plurality of chart entries, the plurality of chart entries including:

i) a general alert chart entry displaying alert status of managed entities in the storage area network;

ii) a storage chart entry indicating alert status of managed storage entities in the storage area network;

iii) a host chart entry indicating alert status of managed host entities in the storage area network; and

iv) a connectivity chart entry indicating alert status of managed connectivity entities in the storage area network.

34. (Original) The network monitoring device of claim 18 wherein the server is further operable to:

receive a user input corresponding to selection of at least one node entry from among the node entries displayed in the status array;

display an expanded menu of status options for the selected entry; and

display an expanded status report corresponding to the expanded menu and a response to the menu of status options.

35. (Original) A computer program product having a computer readable medium operable to store computer program logic embodied in computer program code encoded thereon for gathering and monitoring the simultaneous status of nodes in a storage area network (SAN), comprising:

computer program code for receiving alert messages corresponding to status events in the storage area network, each status event having a corresponding event category and severity value;

computer program code for aggregating the alert messages according to event category and severity value to generate a category specific severity ranking of the alert messages;

computer program code for displaying a status array having a plurality of chart entries, each chart entry corresponding to alert messages of a particular event category and each chart entry having a node entry for each node having status attributable to the alert messages; and

computer program code for displaying, within at least one chart entry, node entries having a status event associated with the event category for that chart entry, the

node entries displayed in the chart entry according to the severity ranking and each node entry indicative of a severity scale of status for the corresponding effected node.

36. (Original) A computer data signal having program code for gathering and monitoring the simultaneous status of nodes in a storage area network (SAN), comprising:

program code for receiving alert messages corresponding to status events in the storage area network, each status event having a corresponding event category and severity value;

program code for aggregating the alert messages according to event category and severity value to generate a category specific severity ranking of the alert messages;

program code for displaying a status array having a plurality of chart entries, each chart entry corresponding to alert messages of a particular event category and each chart entry having a node entry for each node having status attributable to the alert messages; and

program code for displaying, within at least one chart entry, node entries having a status event associated with the event category for that chart entry, the node entries displayed in the chart entry according to the severity ranking and each node entry indicative of a severity scale of status for the corresponding effected node.

37. (Original) A network monitoring device for gathering and monitoring the simultaneous status of nodes in a storage area network (SAN), comprising:

means for receiving alert messages corresponding to status events in the storage area network, each status event having a corresponding event category and severity value;

means for aggregating the alert messages according to event category and severity value to generate a category specific severity ranking of the alert messages;

means for displaying a status array having a plurality of chart entries, each chart entry corresponding to alert messages of a particular event category and each chart

entry having a node entry for each node having status attributable to the alert messages; and

means for displaying, within at least one chart entry, node entries having a status event associated with the event category for that chart entry, the node entries displayed in the chart entry according to the severity ranking and each node entry indicative of a severity scale of status for the corresponding effected node.

38. (New) The method of claim 1, wherein the severity scale for each node entry is an aggregate value representative of a number of alert messages received at each node entry for a given sampling interval, wherein each node entry is weighted with respect to a corresponding severity level for each alert message, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level.

39. (New) The network monitoring device of claim 18, wherein the severity scale for each node entry is an aggregate value representative of a number of alert messages received at each node entry for a given sampling interval , wherein each node entry is weighted with respect to a corresponding severity level for each alert message, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level.

40. (New) The computer program product of claim 35, wherein the severity scale for each node entry is an aggregate value representative of a number of alert messages received at each node entry for a given sampling interval, wherein each node entry is weighted with respect to a corresponding severity level for each alert message, each severity level representing a range of severity values such that a given status event with

a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level.

41. (New) The computer data signal of claim 36, wherein the severity scale for each node entry is an aggregate value representative of a number of alert messages received at each node entry for a given sampling interval, wherein each node entry is weighted with respect to a corresponding severity level for each alert message, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level.

42. (New) The network monitoring device of claim 37, wherein the severity scale for each node entry is an aggregate value representative of a number of alert messages received at each node entry for a given sampling interval, wherein each node entry is weighted with respect to a corresponding severity level for each alert message, each severity level representing a range of severity values such that a given status event with a given severity value has a corresponding severity level when the given severity value of the given status event is within a range of severity values for the corresponding severity level.